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| Πανεπιστημιο δυτικησ μακεδονιασ – Παιδαγωγικο τμημα δημοτικησ εκπαιδευσησ |
| Εργασία 1η |
| Χρήση του Word |
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| **Τσαλουχίδου Ελεονώρα – Στεφανία 4533** |
| **25/3/2018** |

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| Εργασία 1η |

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# Ecology

## Meaning

Ecology (from Greek: οἶκος, "house", or "environment"; -λογία, "study of") is the branch of biology which studies the interactions among organisms and their environment. Objects of study include interactions of organisms with each other and with lifeless components of their environment. Topics of interest include the biodiversity, distribution, biomass, and populations of organisms, as well as cooperation and competition within and between species.

Ecosystems are dynamically interacting systems of organisms, the communities they make up, and the non-living components of their environment. Ecosystem processes, such as prime production, pedogenesis, nutrient cycling, and niche construction, regulate the flux of energy and matter through an environment. These processes are sustained by organisms with particular life history traits. Biodiversity means the varieties of species, genes, and ecosystems, enhances specific ecosystem service.

# Recycling

## Meaning

Recycling is the process of converting waste materials into new materials and objects. It is an alternative to "conventional" waste disposal that can save material and help lower greenhouse gas emissions (compared to plastic production, for example). Recycling can prevent the waste of potentially useful materials and reduce the consumption of fresh raw materials, thereby reducing: energy usage, air pollution (from incineration), and water pollution (from landfilling).

Recycling is a key component of modern waste reduction and is the third component of the "Reduce, Reuse, and Recycle" waste hierarchy.

There are some ISO standards related to recycling such as ISO 15270:2008 for plastics waste and ISO 14001:2004 for environmental management control of recycling practice.

Recyclable materials include many kinds of glass, paper, and cardboard, metal, plastic, tires, textiles, and electronics. The composting or other reuse of biodegradable waste—such as food or garden waste—is also considered recycling. Materials to be recycled are either brought to a collection center or picked up from the curbside, then sorted, cleaned, and reprocessed into new materials destined for manufacturing.

# Global Warming

## Meaning

Global warming, also referred to as climate change, is the observed century-scale rise in the average temperature of the Earth's climate system and its related effects. Multiple lines of scientific evidence show that the climate system is warming. Many of the observed changes since the 1950s are unprecedented in the instrumental temperature recordwhich extends back to the mid-19th century, and in paleoclimate proxy records covering thousands of years.

In 2013, the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report concluded that "It is extremely likely that human influence has been the dominant cause of the observed warming since the mid-20th century." The largest human influence has been the emission of greenhouse gases such as carbon dioxide, methane and nitrous oxide. Climate model projections summarized in the report indicated that during the 21st century, the global surface temperature is likely to rise a further 0.3 to 1.7 °C (0.5 to 3.1 °F) in the lowest emissions scenario, and 2.6 to 4.8 °C (4.7 to 8.6 °F) in the highest emissions scenario. These findings have been recognized by the national science academies of the major industrialized nations and are not disputed by any scientific body of national or international standing.

Complex Table (less accessible)

**Class Schedule**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Lesson** | **Topic** | **Assignment** | **Points** | **Due** |
| 1 | What is Distance Learning? | Wiki #1 | 10 | March 10 |
| Presentation | 20 |  |
| 2 | History & Theories | Brief Paper | 20 | March 24 |
| Spring Break | | | | |
| 3 | Distance Learners | Discussion #1 | 10 | April 7 |
| Group Project | 50 | April 14 |
| 4 | Media Selection | Blog #1 | 10 | April 21 |



# The Water Cycle

### Meaning

The water cycle, also known as the hydrological cycle or the hydrologic cycle, describes the continuous movement of water on, above and below the surface of the Earth. The mass of water on Earth remains fairly constant over time but the partitioning of the water into the major reservoirs of ice, fresh water, saline water and atmospheric water is variable depending on a wide range of climatic variables. The water moves from one reservoir to another, such as from river to ocean, or from the ocean to the atmosphere, by the physical processes of evaporation, condensation, precipitation, infiltration, surface runoff, and subsurface flow. In doing so, the water goes through different forms: liquid, solid (ice) and vapor.

The water cycle involves the exchange of energy, which leads to temperature changes. When water evaporates, it takes up energy from its surroundings and cools the environment. When it condenses, it releases energy and warms the environment. These heat exchanges influence climate.

The evaporative phase of the cycle purifies water which then replenishes the land with freshwater. The flow of liquid water and ice transports minerals across the globe. It is also involved in reshaping the geological features of the Earth, through processes including erosion and sedimentation. The water cycle is also essential for the maintenance of most life and ecosystems on the planet.

# Renewable Energy

## Meaning

Renewable energy is energy that is collected from renewable resources, which are naturally replenished on a human timescale, such as sunlight, wind, rain, tides, waves, and geothermal heat. Renewable energy often provides energy in four important areas: electricity generation, air and water heating/cooling, transportation, and rural (off-grid) energy services.

Based on REN21's 2016 report, renewables contributed 19.2% to humans' global energy consumption and 23.7% to their generation of electricity in 2014 and 2015, respectively. This energy consumption is divided as 8.9% coming from traditional biomass, 4.2% as heat energy (modern biomass, geothermal and solar heat), 3.9% hydro electricity and 2.2% is electricity from wind, solar, geothermal, and biomass. Worldwide investments in renewable technologies amounted to more than US$286 billion in 2015, with countries like Chinaand the United States heavily investing in wind, hydro, solar and biofuels. Globally, there are an estimated 7.7 million jobs associated with the renewable energy industries, with solar photovoltaics being the largest renewable employer. As of 2015 worldwide, more than half of all new electricity capacity installed was renewable.

Renewable energy resources exist over wide geographical areas, in contrast to other energy sources, which are concentrated in a limited number of countries. Rapid deployment of renewable energy and energy efficiency is resulting in significant energy security, climate change mitigation, and economic benefits. The results of a recent review of the literature concluded that as greenhouse gas (GHG) emitters begin to be held liable for damages resulting from GHG emissions resulting in climate change, a high value for liability mitigation would provide powerful incentives for deployment of renewable energy technologies. In international public opinion surveys there is strong support for promoting renewable sources such as solar power and wind power. At the national level, at least 30 nations around the world already have renewable energy contributing more than 20 percent of energy supply. National renewable energy markets are projected to continue to grow strongly in the coming decade and beyond. Some places and at least two countries, Iceland and Norway generate all their electricity using renewable energy already, and many other countries have the set a goal to reach 100% renewable energy in the future. For example, in Denmark the government decided to switch the total energy supply (electricity, mobility and heating/cooling) to 100% renewable energy by 205

# Η οικογένειά μου